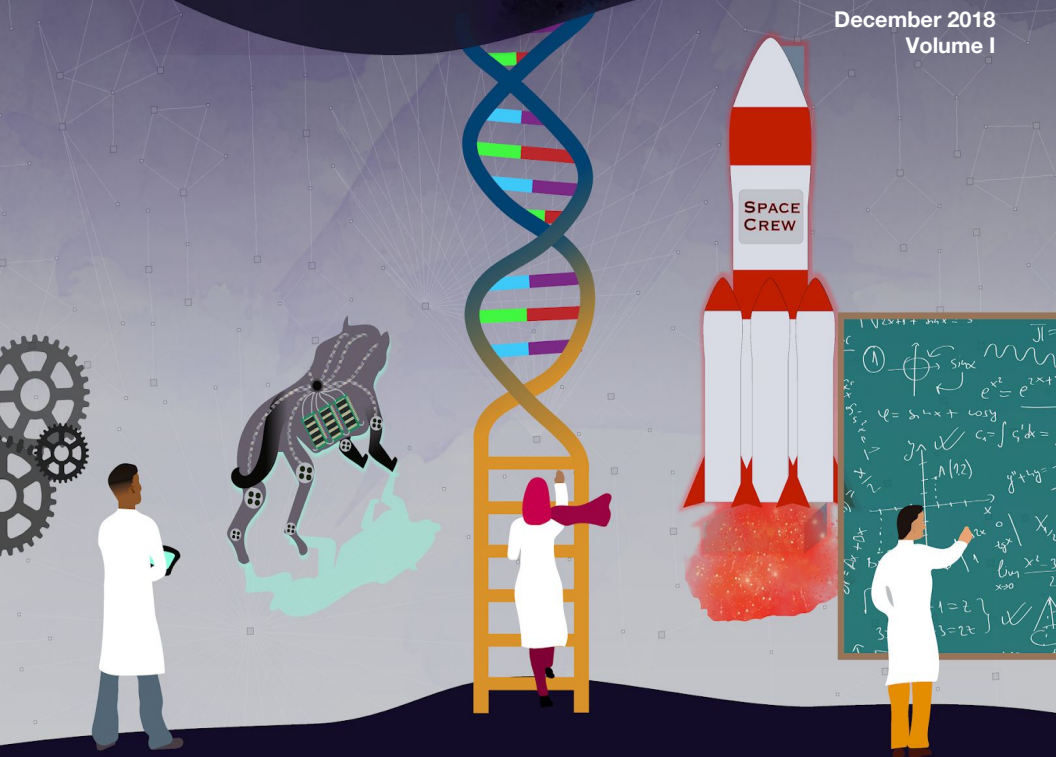


STEM Beyond High School

Guidebook to STEM

**December 2018
Volume I**



Scholarships

Volunteer Opportunities

Mentorship

Support Programs

Workshops



Step into STEM

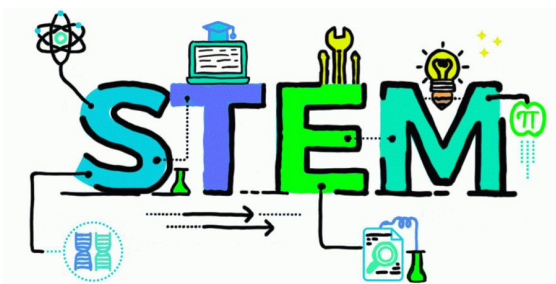
Step into STEM is a University of Toronto - recognized group that aims to break down barriers for underrepresented youth and create an engaging environment that fosters a passion for science, technology, engineering and mathematics (STEM) fields.

Core Values:

Representation, Accessibility, Independency, Collaboration.

Goals:

1. Stimulate skill & professional development in order to equip students with tools to empower themselves.
2. Create a supportive environment that promotes resilience in STEM.
3. Foster a passion for science by creating and connecting to STEM opportunities.



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*Cover designed by Istahil Ali.

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The goal of this handbook is to:

Compile STEM resources (such as scholarship and mentorship programs) available online, at the University of Toronto (UofT) and around the GTA that serve students during high school and through their transition to post-secondary education.

Scholarships

Scholarship	Description	Eligibility	Deadline	Contact
TD Scholarships for Community Leadership	Students who have demonstrated consistent and outstanding dedication to solving a community problem or making their community a better place. For example, you may be cleaning up the environment, promoting social justice, or fighting child poverty.	Students in the final year of high school (outside Quebec) or CEGEP (in Quebec)	To be determined (likely November 2019)	www.td.com/ca/en/personal-banking/solutions/student-banking/community-leadership-scholarship-for-canadians/
MAX High School Scholarship	Scholarships recognize and reward high school and college or university students who have excelled in academics and combined this achievement with outstanding contributions to their school and or community.	High school student	Refer to the website for information on various specific scholarships	www.maxgala.com/scholarships/
Investing in our Diversity	Successful scholarship recipients are selected from among Toronto's up-and-coming diverse young leaders. Each recipient must have made a strong contribution to their communities in promoting diversity, equity and anti-racism dialogue.	First or second year university students under 25 years of age	To be determined (likely February 2019)	www.torontohousing.ca/iiods
Kathy Milsom Scholarship	Student living in Toronto Community Housing studying engineering full-time at the University of Toronto.	Full-time university students	To be determined (likely February 2019)	www.torontohousing.ca/residents/getting-involved/scholarships/Pages/Kathy-Milsom-Scholarship.aspx
Limitless Heights Scholarship	The scholarship recognizes the recipient's contribution to community development initiatives.	Toronto Community Housing residents of all ages from the Lawrence Heights and Neptune communities	To be determined (likely May 2019)	www.torontohousing.ca/residents/getting-involved/scholarships/Pages/Limitless-Heights.aspx
Black Business and Professionals Association National Scholarships	Eligible applicants must be a member of the Canadian Black community (i.e. a Black person of discernible African ancestry and must self identify as Black/African-Canadian/African-Caribbean/African-American) who is a Canadian citizen or permanent resident of Canada.	Maximum 30 years of age at the start of the 2017-18 academic year, and be enrolled as a full-time student in the academic year 2017-2018 at an accredited post-secondary institution.	To be determined (likely June 2019)	www.bbpa.org/national-scholarships/scholarships-eligibility-criteria/

Mentorship Programs

Opportunity	Description	Eligibility	Deadline	Contact
Women In Science and Engineering (WISE) UofT High School Mentorship Program	Connects high school students with undergraduate and graduate student mentors to help students with professional and personal development.	High school students	To be determined (likely October 2019)	www.wiseuoft.org/high-school-outreach
STEM Fellowship STEMpowerment Mentorship Program	Program pairs undergraduate or high school mentors with mentees based on their mutual areas of interest.	Grades 8-12	To be determined	www.stemfellowship.org/stempowerment-mentorship
University of Toronto Summer Mentorship Program (SMP)	The Summer Mentorship Program gives high school students of Indigenous or African ancestry a chance to explore health sciences at the University of Toronto in July.	Completion of a Grade 10 or 11 science, social science or humanities course	March 22, 2019	www.md.utoronto.ca/SMP
Sickkids Mentorship Program (Manulife Kids Science)	Each summer a group of high school students are invited to The Hospital for Sick Children (SickKids) for a Mentorship Program. Students will be assigned to a wide range of laboratory tasks.	High school students	To be determined (likely March 2019)	www.sickkids.ca/Research/kidscience/programs/mentorship
STEM School Based Mentoring - Big Brothers Big Sisters	Provides schools their program with a bin filled with age appropriate STEM focused games and activities. Their goal is to build interest and skills in STEM while they also build friendships.	Grades K-8	To be determined	www.bbbsbc.org/stem-school-based/
The Canadian Association for Girls in Science (CAGIS)	A club for girls aged 7-16 that facilitates interest in Science, Technology, Engineering, and Mathematics (STEM). They have monthly field trips to the workplaces of women and men in STEM fields.	Girls aged 7-16	Rolling acceptances	www.girlsinscience.ca
Girls E-Mentorship Innovation (GEM)	They offer an innovative mentorship program for female youth facing multiple barriers. Each year, they match a select group of high-achieving diverse young women with talented professional women.	Students that identify as girls and attend high school in the GTA for the duration of the program	To be determined in 2019	www.girlsementorship.com

Jobs/Volunteer Programs

Opportunity	Description	Eligibility	Deadline	Contact
Visions of Science Network for Learning Inc. (VoSNL) - Community STEM Clubs	Community-based STEM clubs across the Greater Toronto- Hamilton Area that provide year- long, hands-on opportunities for children and youth to explore the areas of STEM.	Grades 3-8: Community STEM Clubs Grades 8-12: Community STEM Leaders	To be determined (refer to the website with regards to location)	www.vosnl.org/science-clubs/
Student Advancement Research (StAR) Internship	Provides high school students who are of Black or Indigenous heritage with a first-hand perspective of the research currently underway at SickKids through a unique work experience over six weeks in the summer.	Grades 11/12, Black/Indigenous Students	To be determined (refer to the website)	www.sickkids.ca/Research/kidsscience/programs/StAR-Internship/Index.html
Mount Sinai Summer Program	With over 125 programs and activities that suit various needs and skills, they are looking for enthusiastic and committed people to support hospital staff and enhance the comfort and care of all patients.	16 years and older	To be determined in 2019	www.mountsinai.on.ca/patients/volunteer/volunteer-opportunities
STEM Kids Rock	An organization dedicated to inspiring the next generation of STEM leaders. Co-founded by teens, you can often find STEM Kids Rock and their volunteer teen scientists at community centers, schools, museums and camps to engage young students in interesting and fun STEM related topics.	High school students	To be determined (refer to the website)	www.stemkidsrock.com/
Art the Science	A Canadian not-for-profit organization committed to celebrating the connections between art and science. They are happy to work with high school students looking to complete their volunteer hours while learning science communication skills.		To be determined	www.artthescience.com/
University Health Network (UHN) Volunteer Program	UHN offers an array of opportunities to use and share existing/new skills, meet new people and truly make a difference in the lives of our patients.	Ages 18 years and above	Rolling acceptances	www.uhn.ca/corporate/ways-help/Volunteering_UHN/Pages/how_to_become_a_volunteer.aspx

Research Opportunities

Opportunity	Description	Eligibility	Deadline	Contact
FSST Online Research Coop Program	The program provides senior high school students with much sought-after opportunities to work with the leading national scientists in the field of student choice.	High school students Grades 10-12	To be determined (likely April for the summer session and November for the fall session)	www.journal.fsst.ca/index.php/isst/pages/view/coop
Student Advancement Research (StAR) Internship	The program provides high school students who are of Black or Indigenous heritage with a first-hand perspective of the research currently underway at SickKids through a unique work experience over six weeks in the summer.	High school students Grades 11/12, Black/Indigenous Students	To be determined (likely January 2019)	www.sickkids.ca/Research/kidsscience/programs/StAR-Internship/Index.html
Youth Summer Program (YSP)	The YSP offers students an exclusive glimpse into Medicine and Law. Students participate in the exploration of the respective fields, career opportunities, and how to prepare for post-secondary admission/ education.	High school students	To be determined	www.ysp.utoronto.ca/
York University's Spark Lab Programs	Spark offers week-long sessions designed for students who want more "hands-on" science. Using experiment-based learning, students explore physics, biology and chemistry through lab work.	High school students	To be determined (there are multiple sessions throughout summer)	www.helix.science.yorku.ca/
York University's Helix Summer Science Institute	One of Canada's premier high school summer science enrichment program for high-performing students,	High school students	Depends on the program and the grade	www.helix.science.yorku.ca/
STEM Fellowship STEMpowerment Internship	The program offers students the unique opportunity to participate in cutting-edge research in a university lab, for five days during spring break.	High school students Grades 10-12, at least 15 years of age as of March 1st, 2018	To be determined (refer to website)	www.stemfellows.org/gta-internships/
Ryerson University - SciXchange's Harriet Brooks Internship (HBI)	A one-week program centered around scientist spotlights, leadership skills, and activity development; including exposure to underrepresented members of the STEM community.	High school students	To be determined	www.ryerson.ca/scixchange/SXCnewsevents/2018/08/youth-engagement-through-scixchange/
Scihigh-Lunenfeld-tanenbaum Research Institute	Paid internships for senior high school students during March break and the summer. These highly competitive positions are for those interested in pursuing careers in research.	High school students; Completion of grade 11 biology and chemistry courses; must be 16 years old	To be determined, refer to website	www.scihigh.ca/teachers/internship/

Experiential Programs

Opportunity	Description	Eligibility	Date	Contact
Women in Science and Engineering (WISE) UofT High School Conference	Bringing together Ontario high school students with post-secondary students, industry guests, and those in academia. The day will consist of keynote speakers, workshop series, and more on the topics of innovative research, post-secondary education in the STEM fields, and personal career journeys.	High school students	To be determined (likely Fall 2019)	www.wiseuoft.org/high-school-outreach
hEr VOLUTION Annual Canadian Women in STEM Conference	An elite line up of Keynotes, Panels and, as requested by you, breakout sessions that address these important topics and foster discussions relating to barriers, lack of diversity, and inclusion for women and minorities in STEM.	High school students	To be determined (likely October 2019)	www.hervolution.org/event/breaking-down-barriers-unleashing-the-power-of-inclusion/
Girls In STEM Conference	The Metamorphosis Girls STEM Conference aims to support girls in studies and career paths in STEM. Their mission is to foster partnerships with people and organizations who are dedicated to creating welcoming spaces for girls in STEM, while engaging girls in the making of their own STEM stories.	A survey is sent out to TDSB high school students internally to apply	The event takes place on March 8th, 2019	www.girlsstem.ca/
University of Toronto Engineering Outreach Programs	Multiple programs including: UofT Engineering Academy, Grade 12 Enriched Program, Engineering Outreach Math Preparation Program, Engineering High School Saturday Program, & Da Vinci Engineering Enrichment Program (DEEP).	High school students	Refer to the website for details regarding deadlines of the specific programs	www.outreach.utoronto.ca/academics-research/bachelor-kinesiology-bkin/future-students/reach-ahead-high-school-workshops
Science Unlimited (Pre-university Academic Enrichment Program)	Science Unlimited offers high school students a once-in-a-lifetime opportunity to participate in a week of workshops from the Departments of Astronomy and Astrophysics, Chemistry, Computer Science, Earth Sciences, Math, Physics and the School of the Environment.	Grade 10 or 11	Applications open August 2019	www.scienceunlimited.ca/academics-research/bachelor-kinesiology-bkin/future-students/reach-ahead-high-school-workshops
Reach Ahead High School Workshops	This reach ahead workshop is designed specifically for SHSM students pursuing Health & Wellness, and Sports sectors. Using a combination of teaching styles, students will participate in a series of group experiential activities that highlight emerging opportunities for kinesiology and physical education graduates.	High School Students interested in Kinesiology and Physical Education	The event takes place on April 20th (9 to 2:20pm), 2019.	www.kpe.utoronto.ca/academics-research/bachelor-kinesiology-bkin/future-students/reach-ahead-high-school-workshops

Experiential Programs

Opportunity	Description	Eligibility	Date	Contact
DEEP Summer Academy (pre-university program)	Organized by the University of Toronto's Faculty of Applied Science & Engineering, DEEP Summer Academy offers a diverse range of pre-university engineering and science courses. All programs will run at U of T's St George campus.	High school students interested in university-level engineering and science courses.	Not specified	www.outreach.utoronto.ca/pre-university-programs/deep/deep-summer-academy/
SHAD	SHAD is an enrichment program where high school students spend the month of July living at a host university campus outside their hometown and engage in experiential learning in STEAM & Entrepreneurship. Participants get hands-on learning through lectures, labs, workshops and challenges facilitated by industry professionals and renowned university professors. SHAD is an unparalleled opportunity to explore Canada, meet like-minded peers and enter into a lifelong alumni network of >17 000 Change Makers.	High school students Grades 10-12 (A range of bursaries are available to ensure the program is accessible to students with demonstrated financial need.)	To be determined (likely November 2019)	www.shad.ca
McMaster LEAP	Developed for secondary school students, LEAP – the Learning Enrichment Advancement Program – delivers innovative summer programming in McMaster's state-of-the-art engineering laboratories. Gain a deeper understanding of science, mathematics and technology while exploring today's most exciting areas of engineering and computer science. Enriching, hands-on activities encourage creativity, personal growth and a passion for learning.	High school students	To be determined	youthprograms.engineering.mcmaster.ca/
IBBME Biomedical Engineering and Me (iBEAM)	Workshop opportunity to interact with professors and graduate students and learn about tissue engineering, medical devices and more via hands-on activities at U of T.	Students entering grades 7,8 and 9 in September	Rolling acceptances	www.ibbme.utoronto.ca/current-students/initiatives/outreach/
Google: Computer Science Summer Institute	3-week summer program for graduating high school students intending to pursue Computer Science in University. Various locations in the US. Google will provide housing and travel costs.	High school students passionate about Computer Science and technology	Application available early 2019	www.buildyourfuture.withgoogle.com/programs/cssi-hbcu/

Other Support Programs

Opportunity	Description	Eligibility	Deadline	Contact
Manulife Kids Science Program	Manulife Kids Science coordinates its outreach through seven main types of programs: Career Workshops, Lab Visits, Science Extravaganza, Science Workshops, Speakers Bureaus, Manulife Kids Science TV Show (broadcast throughout the hospital on CCTV), and Summer Mentorships.	1. Patients receiving medical care at SickKids. 2. Youth living in priority neighborhoods from Toronto & surrounding areas. 3. Youth from remote Ontario communities.		www.sickkids.ca/Research/kids-science/programs/index.html
STEM Fellowship Big Data Challenge	A competition that helps high school students get excited about Data Science and its potential to support inquiry-based learning and problem solving with open data. The Big Data Challenge involves STEM students undertaking independent research projects to tackle real-world problems with the best industry analytical tools while learning about digital citizenship.	High school students Grades 10-12	To be determined (likely October 2019)	www.stemfellowship.org/big-data-challenge/
STEM Fellowship High School Scholarly Writing Challenge	The challenge provides high school students with an opportunity to showcase their original research. It aims to prepare students interested in STEM for the world of research and science publishing.	High school students Grades 10-12	To be determined (likely October 2019)	www.stemfellowship.org/scholarly-writing-challenge/
FEM in STEM	The Catalyst Program: Engage in 6 months of flexible learning and discovery through Canada's first personal and professional growth accelerator for young women interested in STEM. Successful applicants get access to bi-weekly online learning modules on soft skills and post-secondary/career prep, access to a hub of mentors, as well as the opportunity to outreach and inspire their own communities!	Free to all high school and undergraduate females		www.feministm.com/catalyst-t-program
hEr VOLUTION	hEr VOLUTION's aim is to advance education by providing workshops and instructional seminars on topics relating to STEM for low income and marginalized youth with a focus on girls and young women. Programs include GO!STEM Program; STEMing UP; Engineering the Future; All things Space and a summer Program in Environment and Public Health.		Refer to the website for information about the specific program you're interested in.	www.hervolution.org/

Other Support Programs

Opportunity	Description	Eligibility	Deadline	Contact
Pathways to Education	The Pathways to Education Program provides a comprehensive set of academic, financial, social, and one-on-one supports to youth.	Youth in Lawrence Heights, Regent Park, Rexdale and Scarborough Village	Refer to the website for information about specific locations and their deadlines	www.pathwaystoeducation.ca/pathways-communities
CEE Centre for Young Black Professionals	It is dedicated to addressing economic issues affecting Black youth. By ensuring the development of relevant and meaningful services and supports, CEE works alongside the youth they serve to achieve emotional and financial freedom through Careers, Education and Empowerment (CEE) (specifically Digital Technology)	Ages 18 and over	Refer to the website for information about the specific program you're interested in.	www.ceetoronto.com/program/s/
Black Outreach Leadership Detective (BOLD)	BOLD seeks to increase the representation of Black Ontario high school students attending University and support them in that journey by providing an online platform where students can see profiles of Black University students and professionals, scholarship information, events, volunteer opportunities and mentorship opportunities.	High school students		www.boldontario.com
Canadian Young Physicists' Tournament (CaYPT)	The International Young Physicists' Tournament (IYPT) is an international competition held for high school students across the world who are interested in physics. STEM Fellowship organizes the national competition, the Canadian Young Physicists' Tournament (CaYPT), in order to determine Canada's representative team for the annual IYPT.	High school students	January 1st, 2019 for early-bird registration, and February 16th, 2019 for regular registration	www.stemfellowship.org/caypt
Ontario Science Centre Science School	The Ontario Science Centre Science School offers students a chance to earn their Grade 12 science and math credits and prepare for university in a unique setting. Though they need to be academically strong, students don't need to have the very highest grades to attend this program. The semester starts with a two day team building and communication workshop at an overnight camp. Students also participate in a variety of off-site field trips throughout the semester and on-site activities.	High school students Grade 11 going into Grade 12	Applications for 2019/20 are due on Tuesday, April 2, 2019	www.ontariosciencecentre.ca/School/ScienceSchool/



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